

# OPERATING MANUAL

## **EWS**. CyberCon4

**XX.XXX-CC4**

Version 2.0

Stand 01.09.2023



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## Operating manual

Please read the operating manual carefully and follow the instructions. Keep the operating instructions for the entire service life of the product. Use these operating instructions to familiarize yourself with the device, its correct use and the safety instructions.

## Intended Use

When operating driven tools on turning and milling centers, changing operating parameters arise. EWS.CyberCon4 is intended for data acquisition in the machining process of the driven tool. EWS.CyberCon4 is to be understood as an extension and may only be used in this combination and for no other purpose. EWS.CyberCon4 is delivered assembled and can only be read out in connection with the CyberCon4 app.



The user is liable for improper use.

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## 1. SAFETY



**DANGER!** The device generates an electromagnetic field during operation. The field may interact with medical implants.  
Recommendation: Consult your doctor before operating the device to avoid the risk of serious or fatal injury.

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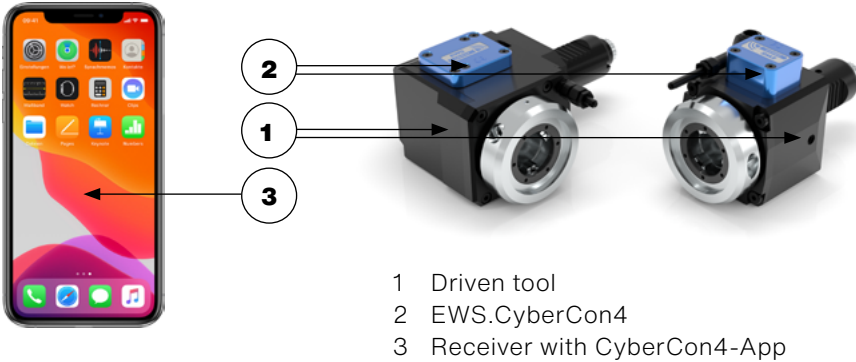
Children and adolescents under 16 years of age as well as persons who are not familiar with these operating instructions may not use the device. Persons with limited physical or mental abilities may only use the device if they are supervised or instructed by a competent person. Never use the device if you are tired, sick or under the influence of alcohol, drugs or medication.



**WARNING!**  
**Risk of explosion if the battery is incorrectly replaced.**  
The battery may only be changed by EWS service staff.  
Contact details under [10. Service/guarantee](#).

## 2. FUNCTION

With EWS.CyberCon4, driven tools (1) for turning and milling centers are expanded with sensors. The extension is used to monitor the operating parameters (see [4.2 Operation / operating parameters & functions](#)) that arise during the use of the driven tool. This enables integration into Industry 4.0 processes and the control of maintenance measures. The sensor system is located under the cover (2) and sends the recorded data to the receiver (3) via Bluetooth. The values can be read out with the CyberCon4 app.



### 3. INSTALLATION

When delivered, EWS.CyberCon4 is in stand-by mode.  
The operating time is 12 months from the time of commissioning,  
with normal use (2x app query per day).

Assembly on the machine:

- Mount the driven tool properly
- Operating instructions at <https://www.ews-tools.de/en/downloads>



Activate:

- Drive the driven tool with at least 500 / min for 5 seconds
- EWS.CyberCon4 is now activated and can be read in the CyberCon4 app
- The data can now be read out without rotation!



#### **DANGER!**

**Risk of injury with rotating parts!**

Always keep the machine door closed.

## 4. OPERATION

A receiver with an active Bluetooth interface is required to operate EWS. CyberCon4 (tablet, smartphone). EWS.CyberCon4 is operated via the CyberCon4 app.

The app can be installed via the Apple App Store or the Google Play Store.

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#### 4.1 REQUIREMENTS

BLE (Bluetooth Low Energy 4.1)

Software

Apple from iOS 10

Android from Android 5.1.1

For best compatibility, an update to the latest version of the operating system is recommended.

#### 4.2 OPERATING PARAMETERS & FUNCTIONS

The following data (operating parameters) can be read out and functions used with the CyberCon4 app.

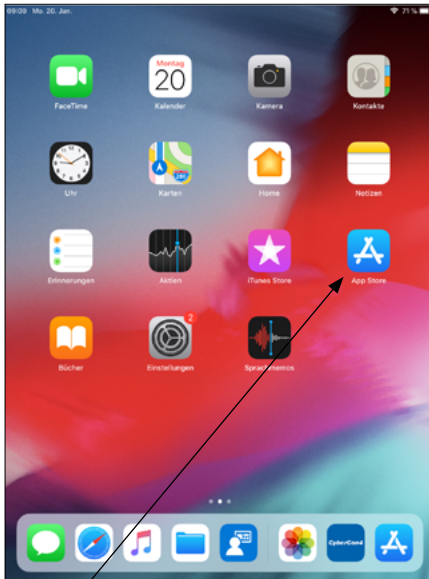
- Serial number of driven tool
- Speed
- Temperature
- Service intervals
- FCS (Fluid Control Sensor) - detection of seal failure
- Battery status
- Average duty cycle
- Number of duty cycles
- Average speed
- Percentage use Temperature and speed range
- Storage of data for offline access
- Export of collected data by e-mail

## 4.3 CYBERCON4 APP

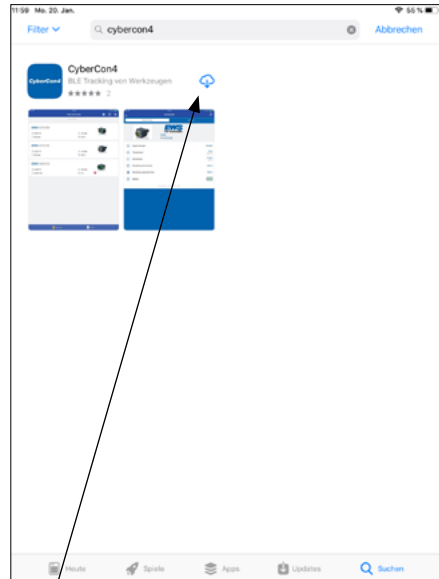
### 4.3.1 INSTALLATION OF THE APP

**1**

Activate the data connections for the Internet and Bluetooth on the receiver (tablet, smartphone).

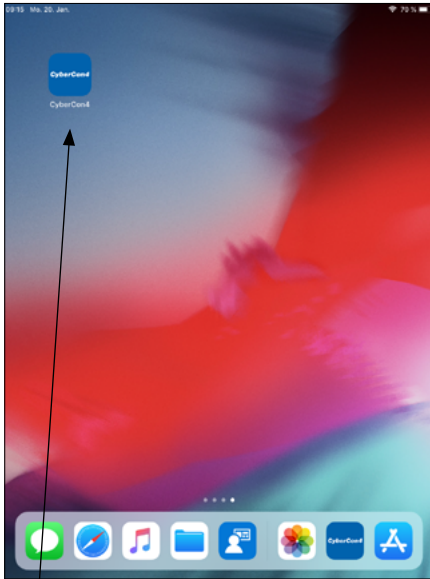
**2**

You can find the app under the name „CyberCon4“ (SYMBOL) in the Apple App Store or Google Play Store.

**3**

Install the app.

### 4.3.2 OPEN



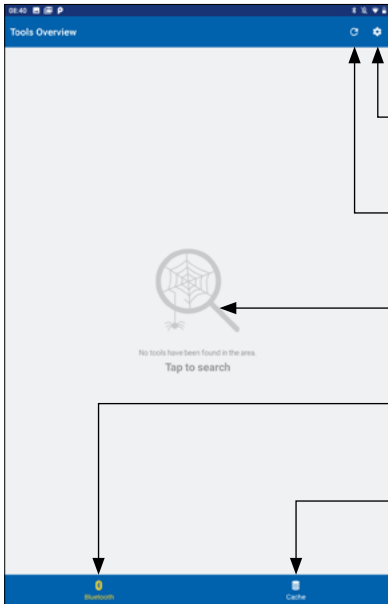
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Open the app with  
CyberCon4 Icon.



### 4.3.3 CYBERCON4 OPERATOR MASKS



#### Surface

1

Settings

2

Refresh page

5

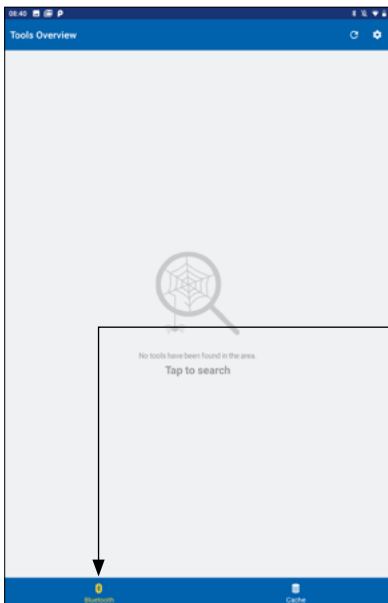
Control panel

3

Bluetooth Live data

4

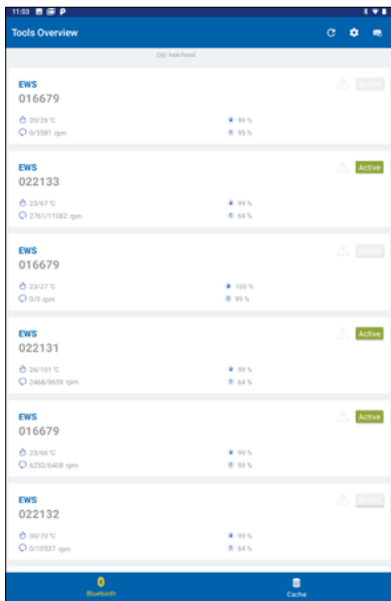
Stored data  
Access only with premium package



#### Bluetooth








The driven tools equipped with EWS.CyberCon4 can be searched for and received under the „Bluetooth“ tab.

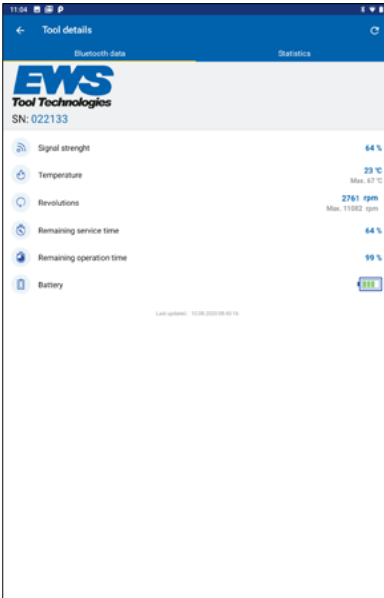
- To do this, tap in the middle of the control panel



List of the driven tools found in the range with EWS.CyberCon4.

- Data is updated and displayed regularly (depending on settings).
- Further data and details can be read by tapping a field.









<b>EWS</b> <b>022132</b>	Serial number driven tool	Number corresponds to the serial number of the driven tools (S/N)
 30/70 °C	Temperature °C	Current / maximum recorded temp.
 0/10537 rpm	Rotational speed 1/min	Current / maximum recorded speed
 64 %	Time remaining service %	Remaining % until the service is due depending on the time used (12 months)
 99 %	Time remaining operation%	Remaining% until service is due depending on the operating parameters used, such as speed and temperature
	Service symbol	A service is due. Please send the driven tool in for service. The symbol lights up as soon as the remaining time is below 10% <a href="#">See 6. Maintenance and care</a>
	Active symbol	Driven tool is in use / spindle rotates
	FCS (Fluid Control Sensor)	Seal failure. The AGW should be stopped immediately to avoid machine damage. Please send in the AGW for service.

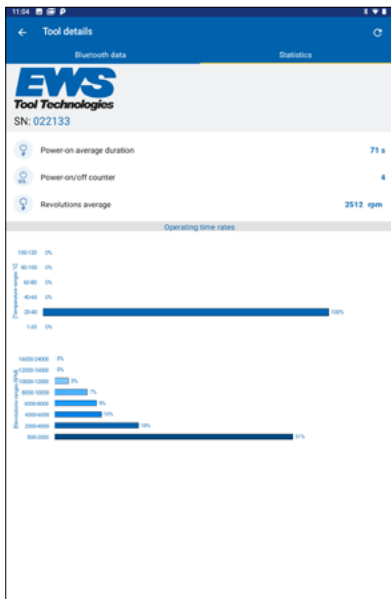


## Bluetooth Data

Here you will find all the data for the selected driven tool.






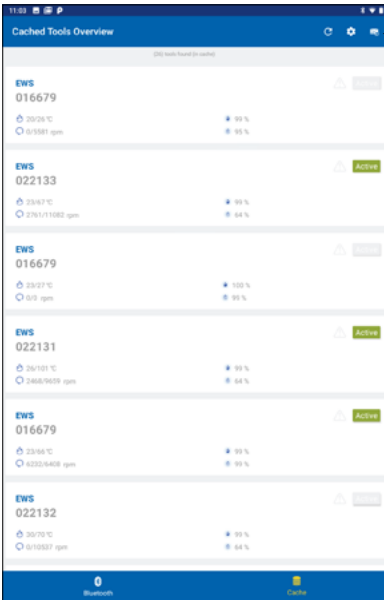
 <b>Signal strength</b>	Current signal strength
 <b>Temperature</b>	Current / maximum recorded temp.
 <b>Revolutions</b>	Current / maximum recorded speed
 <b>Remaining servic</b>	Remaining % until the service is due depending on the time used (12 months)
 <b>Remaining opera</b>	Remaining % until service is due depending on the operating parameters used, such as speed and temperature
 <b>Battery</b>	 Battery status 100%  Battery status 0%



### Statistics

- Display of additional data of the selected driven tool

	<p><b>Power-on average duration</b></p>	<p>Average duty cycle in relation to the entire runtime</p>
	<p><b>Power-on/off counter</b></p>	<p>Number of start-ups in the entire runtime</p>
	<p><b>Revolutions average</b></p>	<p>Average speed in relation to the entire runtime</p>
<p><b>Operating time rates</b></p>		<p>Percentage display of temperature and speed in relation to the total runtime</p>

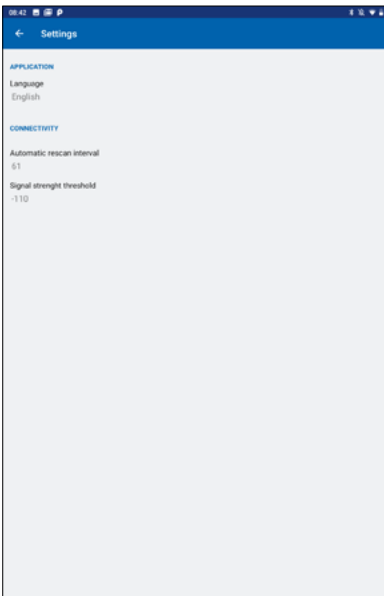


## History / Cache

The received driven tool holders are saved with EWS.CyberCon4 under the „Cache“ tab.

- Data readable without Bluetooth connection
- Further data and details can be read by tapping a field
- All data can be sent via email as an Excel file

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## Settings

You can make various settings here.

- Language (German, English)
- Threshold for signal strength
- Automatic refresh interval
- Setting the update interval

## Limit values for the operation of driven tools

Temperature:	max. 80°C
Speed:	see labeling of driven tool
Other:	see operating instructions driven tool <a href="https://www.ews-tools.de/en/downloads">https://www.ews-tools.de/en/downloads</a>



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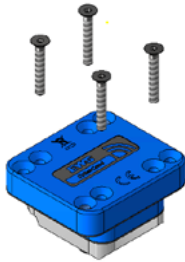
## 5. BATTERY CHANGE



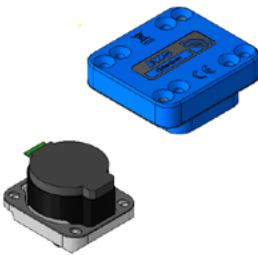
- When changing the battery, always replace all flat gaskets. Spare part set Article no.: 228046
- Cleaning of the tool.
- Visual inspection of the CC4 cover. In case of defects the cover must be replaced.
- There are two versions of the CC4 Unit.



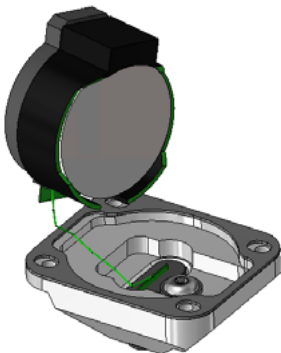
- Changing the battery on variant 1:
- Loosening the outer 4 screws



- Pulling off the sensor unit
- Loosen the inner 4 screws

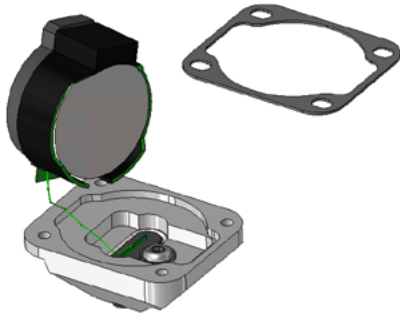


- Removing the cover

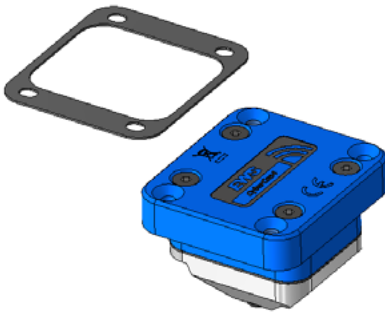


- Tilt the sensor module, but do not pull

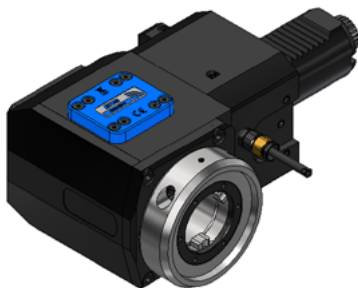
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- Unclip battery and insert new battery
- Replace small flat gasket (make sure the surfaces are clean)

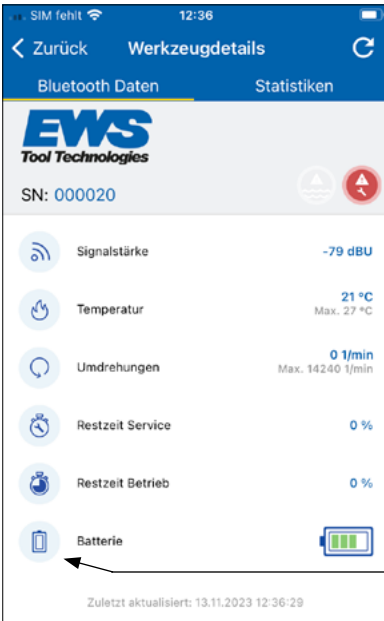


- Fit the cover and tighten the 4 inner screws with 3Nm tighten.
- Replace large flat gasket

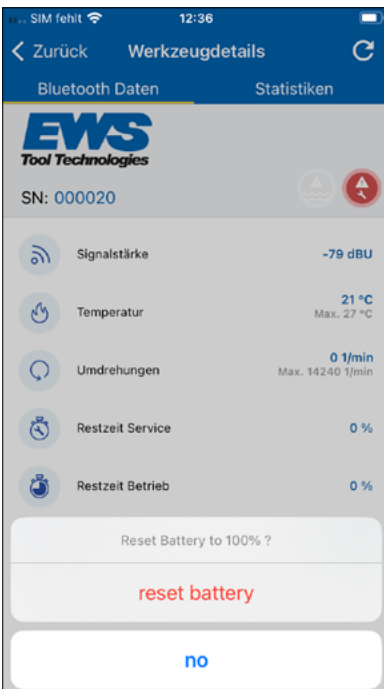


- Place the sensor unit in the driven tool and tighten the 4 outer screws with 3Nm

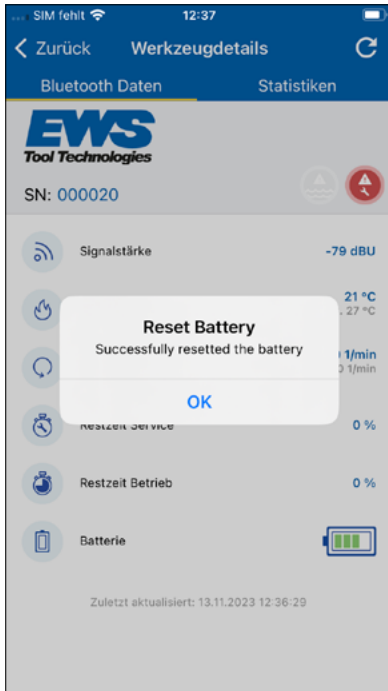




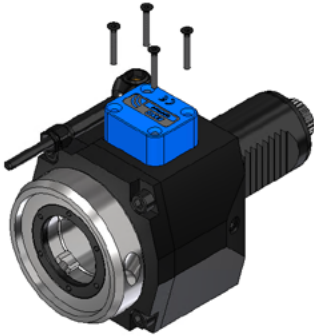
- Set the battery status in the app to 100%
- Tap the battery symbol



- Tap reset battery

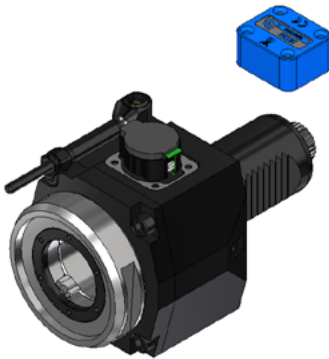


- If the reset is successful the following message appears
- Check sensor unit for function

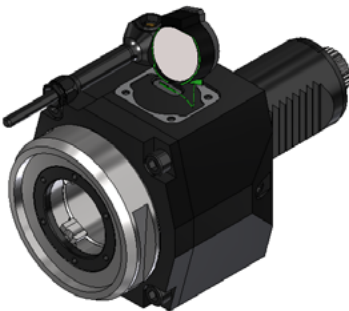


Changing the battery on variant 2:

- Loosening the 4 screws



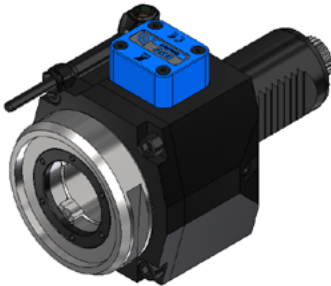
- Removing the cover



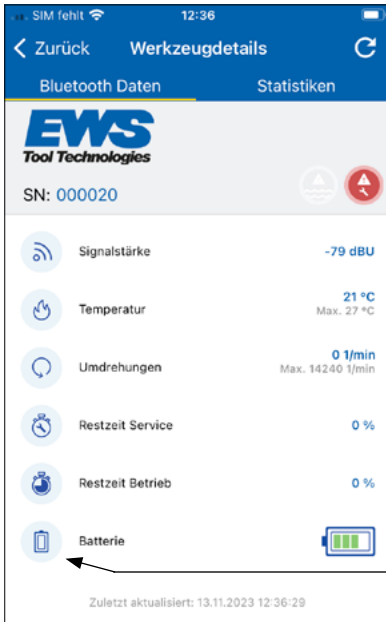
- Tilt the sensor module, but do not pull



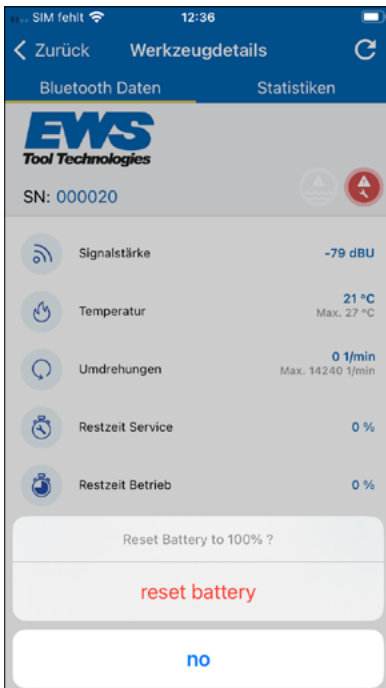
- Unclip battery and insert new battery
- Replace small flat gasket (make sure the surfaces are clean)



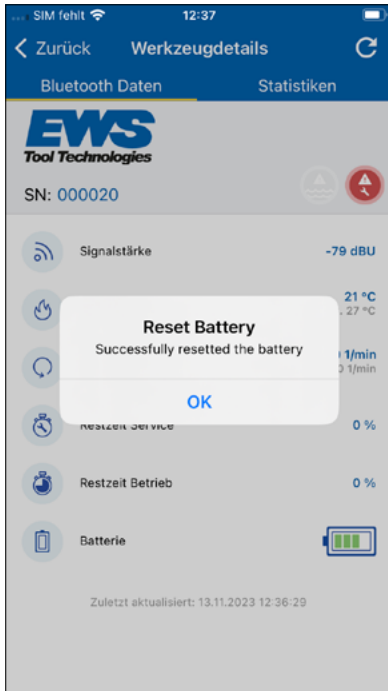
- Place the sensor unit in the driven tool and tighten the 4 outer screws with 3Nm
- Set the battery status in the app to 100%
- Check sensor unit for function



- Set the battery status in the app to 100%
- Tap the battery symbol



- Tap reset battery



- If the reset is successful the following message appears
- Check sensor unit for function

## 6. MAINTENANCE AND CARE

Cleaning: Clean only with a cleaning cloth. Never use compressed air or any cleaning agents.

Service case: In the event of a defect of any kind, contact the service staff. When the service icon lights up in the app, contact the service staff.  
[service@ews-tools.de](mailto:service@ews-tools.de)

**TIP:** Annual maintenance prevents major damage.

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## 7. STORAGE, TRANSPORT AND DISPOSAL



Always store and transport the device dry at a minimum of 10 °C to a maximum of 40 °C.



Do not dispose of in normal household waste.  
Please contact our service or send the device back to us.



### **DANGER!**

Return transportation by air freight is prohibited.

## 8. TROUBLESHOOTING

In case of malfunctions, please report under

**EWS Weigele GmbH & Co. KG**

Telephone +49(0)7161-93040-100

Mail [service@ews-tools.de](mailto:service@ews-tools.de)

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In the event of other faults, please contact our service.

## 9. TECHNICAL DATA

Radio frequency	2.4 GHz RF transceiver, compatible with Bluetooth Low Energy (BLE) 4.1 Specification
Max. Radio power	+5 dBm
Temperature application range	+ 10 ° C to + 80 ° C
489-1 Battery life	Approval testing radio properties after ETSI EN 300 328 V 2.1.1
Weight	Immunity tests according to ETSI EN 301 approx. 12 months
Range BLE	40g EWS.CyberCon4 + driven tool holder up to. max. 7m, depending on environment

CE declaration of conformity





Herewith, EWS Weigele GmbH & Co. KG declares that this EWS CyberCon4 radio module complies with the essential requirements and other relevant provisions of the following guidelines:

Directive 2014/35 / EU - Provision of electrical equipment

Directive 2014/30 / EU - Electromagnetic Compatibility

Directive 2014/53 / EU - provision of radio equipment

Directive 2011/65 / EU - Restriction of the use of certain dangerous substances in electrical and electronic devices

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## 10. SERVICE / GUARANTEE

### Services

- Professional, quick repairs through our service
- Competent advice in the event of malfunctions through our service

### Service address

#### EWS Weigele GmbH & Co. KG

Telephone +49(0)7161-93040-100

Mail [service@ews-tools.de](mailto:service@ews-tools.de)

### Guarantee

1 year warranty on the device for all major defects that are demonstrably attributable to material or production defects.

In the event of a warranty claim, please contact our service.